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AUTHOR Kemmer, Suzanne
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ABSTRACT

An analysis of the evolution of reflexive verbs focuses on reflexive to middle voice development in two-form middle systems, which include Russian, Old Norse, Turkish, and Hungarian. The diachronic processes associated with these systems are examined. The changes in the languages over time represent a gradual change in the semantics of the morpheme undergoing the change rather than simply historical change in which a rule of reflexivization somehow generalizes to become a rule of intransitivization. Further, it appears that the semantic side of morphosyntactic change is more important than is generally recognized, and that semantic change undergone by morphosyntactic forms is a powerful motivating factor in the rise of new grammatical systems. (MSE)

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Diachronic Processes in the Evolution of Reflexives

Suzanne Kemmer
Stanford University

If we approach the category of reflexive from a semasiological perspective, and pose the question, where do reflexive markers come from? What do they turn into? the answer that emerges from cross-linguistic investigation can be summarized in the set of relations given in (1): (summarized from data in Faltz 1977):

(1) 'body,' 'soul' } → emphatic 'self' → reflexive marker → middle marker
'head,' etc. }

Today I will concentrate on the reflexive to middle development represented in the rightmost arrow in (1). First I must clarify the terminology I am using. By middle marker or middle voice marker I mean a morphosyntactic form that indicates that the subject referent is affected by the verbal event—that is, the subject is an undergoer of some type, whether undergoing change of state or location, or undergoing a mental process. This general semantic function covers a range of subtypes fitting this general description, which I will exemplify momentarily. These subtypes together constitute what I term 'middle semantics.' Therefore a middle marker, considered from the point of view of function, is a morphosyntactic instantiation of middle semantics.

The examples in (2)-(7), taken from Old Norse, represent some typical middle uses, that is, semantic classes or types which frequently show middle marking in languages which have a middle marker. In these examples, the italicized morpheme is the middle marker.

Old Norse:

(2) 'Body actions'

lauga-*sk*	'bathe'
klæða-*sk*	'get dressed'
liggja-*sk*	'lie down'

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(3) Intrinsic reciprocal

hitta-*sk*	'meet'
berja-*sk*	'fight'
svara-*sk*	'swear [undying loyalty to each other']'

(4) Emotive reaction

fæla-*sk*	'be, become frightened'
hata-*sk*	'hate, bear enmity towards'
gledja-*sk*	'be, become glad'
undra-*sk*	'wonder at'
hræða-*sk*	'fear'

(5) Inchoative/Spontaneous process

lúka-*sk* upp	'open' (intr.)
grøna-*sk*	'become green'
fylla-*sk*	'fill up, become full'

(6) Cognitive process

þykkja-*sk*	'think' (þykkja 'think')
minna-*sk*	'remember' (minna 'remind')
kenna-*sk*	'recognize, remember' (kenna 'know, recognize')

(7) Self-benefactive/Indirect reflexive

beiða-*sk*	'ask for, request'
eigna-*sk*	'lay claim to' (eigna 'attribute')

(2-7 from CVC)

Languages which have a middle marker, or morpheme that appears in some cluster of the uses I exemplified in (2)-(7), will be said to have middle systems. Middle systems are found in a wide range of language types and language families. Within Indo-European we find them in modern languages of the Romance, Germanic and Slavic families, as well as in the classical languages Greek, Latin, and Sanskrit. Outside Indo-European, middle systems occur in families such as Nilo-Saharan, Niger-Congo, Amerind, Altaic, Finno-Ugric, and Australian. These languages vary to some extent in the types of uses that are marked with middle morphology; but the same basic types turn up again and again marked with the same morphology within a particular language.

1 The semantics of middle voice uses

The uses exemplified in the examples in (2)-(7) might appear rather heterogeneous from a semantic point of view, despite the fact that they can all be characterized as having the property of subject-affectedness. The types in (2) and (3), for example, may seem intuitively quite close to reflexives, in which a subject referent can be conceived of carrying out a transitive action on him or herself, or in which two subjects carry out such an action mutually on each other. Others are more removed from canonical reflexives, such as the emotive and cognitive predicates for which there is not generally considered to be, at any level of analysis, a second argument whose referent is identical to the subject referent.

Much of the semantic heterogeneity of these types comes from the fact that the nature of the property of subject-affectness varies with the semantics of the different classes of predicates and the kinds of nominal participants they require. Emotive and cognitive predicates, for example, are intrinsically subject-affected, and generally only allow one referential nominal participant. Verbs of body care and change in body posture may theoretically allow two, but since the normal, expected endpoint of such actions is the subject referent, and since that referent is an animate, controlling entity, they can easily be conceived as intransitive, one-participant events in which subject is not differentiated from object. (The effects of this semantic characteristic on the marking of such events will be discussed in Section 2 below.) The class of inchoative predicates, unlike the two types just discussed, typically requires an inanimate nominal participant; these predicates indicate actions that may be

expressed as two-participant, transitive actions, but which in some cases are either perceived to happen spontaneously or may simply have pragmatically deemphasized agency. In either case they, too, are linguistically conceived of as one-participant, intransitive events.

For lack of space, I will not go into further details of the semantics of the various middle uses listed in the examples. The brief sketch given above of the relations among the uses is intended to provide some support for the hypothesis, developed more fully elsewhere, that that middle semantics is a coherent, although complex, semantic category. I will be providing further examples of languages which give this category formal instantiation in the course of the paper.

There are also a number of other middle uses besides those enumerated which are attested in many languages with middle systems, such as the passive, impersonal, propensative, and 'antipassive' uses often mentioned in treatments of individual languages. Since these are not relevant to the languages I will be discussing today, I will leave them out of consideration for the time being. Their relationship to middle semantics is taken up in Kemmer (in preparation).

2 Two-form middle systems

I now move on to a consideration of a specific type of middle system. The reader is probably familiar with one or more languages in which the middle marker, i.e. the morpheme that occurs in types of uses like the ones illustrated above from Old Norse, is identical to the reflexive marker. These languages, which I term 'one-form' middle systems, include French, German, Spanish, and a number of non-Indo-European languages like Tarascan (Amerind), Fula (Niger-Congo) and Luo (Nilo-Saharan). Today, I will be examining languages with 'two-form' middle systems–that is, languages which in addition to their middle marker have a formally distinct form that is used in reflexive constructions with ordinary transitive verbs like 'hit' or 'see.' These languages include Russian, Old Norse, Turkish, and Hungarian.

In (8) I have given the pairs of forms that are found in those four languages:

(8)

a.	Russian	Old Norse
full	sebja	sik
reduced	*-sja*	*-sk*

b.	Hungarian	Turkish
full	mag	kendi
reduced	*-kEd-/-kEz-*	*-In-*

These two-form systems have a number of points in common. First is the fact that in each, one of the forms is phonologically 'fuller' than the other form. This is indicated in the examples with the labels 'full' and 'reduced', which are taken from Haiman (1983). The full forms are the forms obligatorily and productively used with ordinary transitive verbs to produce reflexive meaning.

The reduced forms, on the other hand, are not fully productive with transitive verbs stems; when they do occur with such a stem, the meaning of the verb is typically non-reflexive. Reduced forms often occur on stems with no corresponding transitive form, even in cases where on semantic grounds we might expect one to exist. Moreover, the reduced forms can occur on intransitive stems, whereas the full forms generally cannot.

Finally, the reduced forms are the normal forms to use for verbs of "intrinsic reflexivity," such as verbs of body care or change in body posture. As Haiman points out, if a language does allow the possibility of both full and reduced forms with verbs of this type, then the full form occurs only in cases of contrast, emphasis, or other kinds of differentiation of subject from object entity.

Thus, the full and the reduced forms have essentially different ranges of occurrence in languages of this type. What is most striking is the similarity among two-form languages in the types of predicates with which the reduced forms occur—they do not occur randomly on verb roots. Specifically, the reduced forms cover the areas of middle semantics as illustrated above from Old Norse.[1] (9) and (10) present some examples from Turkish and Hungarian

[1]Intrinsic reciprocals are marked differently from reflexives in Turkish. Intrinsic reciprocals in Hungarian will be discussed in Section 3.

of these uses of the reduced forms. (Again, the italicized forms represent the middle markers. Sources of forms cited are given in abbreviated form in parentheses. Full references can be found in the Data References at the end of this paper.)

Turkish:

(9) 'Body actions'

tara-*n*-	'comb one's hair' (N:88)
giy-*in*-	'get dressed' (L:148)
yıka-*n*-	'wash' (L:148)

(10) Emotive reaction

döv-*un*-	'lament' ("beat one's breast") (döv- 'beat')(L:148)
sev-*in*	'rejoice' (sev- 'love') (L:148)
kaç-*ın*	'be reluctant' (kaç- 'escape, flee') (L:148)

(11) Inchoative/Spontaneous process

kalk-*ın*-	'recover' (kalk- 'rise') (L:148)
hastalá-*n*-	'get sick' (hastá 'sick') (S:108)
sal-*ın*-	'oscillate' (sal- 'throw') (L:148)

(12) Cognitive process

ara-*n*-	'search one's mind' (ara- 'search')
taş-*ın*-	'turn things over in the mind' (also: 'move house') (L:149)

(13) Self-benefactive/Indirect reflexive

ed-*in*-	'acquire' (et- 'do')
yap*ın*-	'make for oneself' (yap- 'make')(L:148)

Hungarian:

(14) 'Body actions'

borotvál-*koz-*	'shave'
emel-*ked-*	'rise, get up'
fésül-*kod-*	'comb the hair'
mosa-*kod-*	'wash' (T:113)

(15) Emotive reaction

bán-*kód-*	'grieve, mourn'
csodál-*koz-*	'wonder at, be amazed'
epe-*ked-*	'long for, pine after' (T:113)

(16) Inchoative/Spontaneous process

eresz-*ked-*	'sink' (T:113)
növe-*ked-*	'grow' (Hl:51)
zár-*kóz-*	'close, lock' (T:113)

(17) Cognitive process

gondol-*kod-*	'think, muse, meditate' (T:114)
emlé-*kez-*	'remember' (T:113)

(18) Self-benefactive/Indirect reflexive

kéredz-*ked-* 'ask for, request' (T:115)

The differential distribution of full and reduced forms in two-form languages with regard to verbs of body actions lends strong support to the hypothesis that these verbs are semantically distinct from reflexives. Since reduced forms are associated with middle semantics, and full forms with

reflexive, two-participant semantics, it makes sense to consider the body action verbs as basically middle predicates which can in some languages be pragmatically modified to express two-participant semantics.[2]

From a formal point of view, two-form middle systems themselves fall into two types. In the first, the middle marker is similar in form to the reflexive marker, in fact similar enough to suggest that they are historically related. This type will be termed a 'cognate two-form system'; representative languages are those in 8a., Old Norse and Russian. In the second type, the middle marker is clearly morphologically and etymologically independent of the reflexive marker. This type, called a non-cognate two-form system, is represented by the languages in 8b., Hungarian and Turkish.

Cognate and non-cognate two-form systems, as I have just indicated, are typologically quite parallel. However, if we consider the kinds of diachronic processes that give rise to these systems, we can see that they are the result of two formally distinct kinds of diachronic process.

3 Diachronic processes

The first type of diachronic process associated with two-form middle systems is illustrated by developments in Scandinavian. From internal and direct historical evidence, it can be concluded that the reduced form *-sk* in Old Norse arose from the cliticization of the North Germanic reflexive pronoun **sik* to the preceding verb. Traces of the phonological conditioning of this cliticization persist up to about the 13th century; for example, the Old Norse form *-mk* which closely resembles the first person singular accusative pronoun *mik*, only disappeared in historical times.

The reduced form *-sk*, based on the third person singular accusative of the reflexive pronoun, gradually became extended through the entire verbal paradigm, losing case, number, and person distinctions which the independent form retained. The independent (full) form *sik* was retained as the reflexive form used with typical (i.e. non-body action) transitive verbs; it also remained in contexts of stress, specifically where there was object conjunction or where there was otherwise a contrast with another potential object

[2]Treating these verbs as separate from reflexives is also supported by cross-linguistic data showing that distinct formal treatment for verbs of this type is typologically quite widespread. In languages without middle systems, for example, these verbs are typically treated as active intransitives, e.g. English 'wash', 'dress.'

(Nygaard 1905). This indicates that the original conditioning factor in the cliticization was phonological/pragmatic: the reduced form arose in contexts in which the old reflexive pronoun was unstressed.

Interpreting these developments from the point of view of the functions of the two forms in the language system, it is clear that the formal difference between the two forms, originally created by a rather mechanical reduction process, became reinterpreted as indicating a semantic difference. This difference can be characterized as basically a reflexive vs. non-reflexive middle distinction. In Modern Icelandic, the full form retains the functions it had when it was a stressed pronoun, namely singling out the subject discourse referent as the referent of the object noun phrase, when such reference is either unexpected or to be contrasted with other possible referents. The reduced form, on the other hand, has essentially been divorced from referring to any entity at all; it operates to signal the various kinds of middle semantics associated with various types of predicates, as described in Section 1. The result is a two-form system in which the full and the reduced forms have essentially different semantic and pragmatic functions. Modern Icelandic préserves to a great extent the two-form system that was created already by the time of Old Norse; in continental Scandinavian, on the other hand, the system is to a great extent vestigial.[3]

The diachronic process sketched above would also account for the rise of two-form systems in Russian and for other languages in which the two forms are phonologically close enough to make the historical connection plausible (e.g. Djola ɔ/ɔrɔ). Instances of this type of development are cases of *repartition* or *split*, a well-attested type of historical change. See Breal (1897) and Heine and Reh (1984) for further exemplification of repartition.

The diachronic process which gives rise to non-cognate two-form systems such as those in Turkish and Hungarian is not as transparent as that described above for cognate two-form systems, since there is typically no corresponding lexical form with less grammaticalized meaning as there is in the cognate two-form system. Yet it is possible to draw some fairly reliable conclusions about historical developments based on observation of the

[3]There is evidence in Norwegian that the full form *seg* is beginning to undergo the same type of reflexive to middle development as its ancestor **sik*; it is now the normal form with verbs in the body action class (*sitte seg, vaske seg*), and has crept into the emotive response class (*glæde seg*) and a few other areas of middle semantics. Apparently a similar process is taking place in Russian (Henning Anderson, p.c.).

synchronic properties of such systems.

First, we might note that the full forms in these languages are nominal forms; they take person, case and number morphology as other nouns do. Furthermore their etymological origin is fairly transparent; Hungarian *mag* is from a noun meaning 'seed', and Turkish *kendi* means 'self'; both are used in emphatic expressions like 'I myself.' The reduced form in each language is, on the other hand, a verbal infix, with no lexical or syntactic independence. From what is known about processes of grammaticalization, we can conclude that if the reduced forms did come from an originally meaningful form (as opposed to some reinterpreted phonological opposition), they have existed as grammatical items much longer than their corresponding full forms, which appear to have been recently grammaticalized into reflexive markers from emphatics.[4]

Considering the two forms from the point of view of meaning, we can see the reduced forms covers a far wider semantic range than the full forms, since they signal a range of predicate types of varying argument structures, as indicated earlier. See Traugott (1986) for evidence that extent of acquired polysemy is, like degree of formal fusion, a function of diachronic time-depth.

These differences in the two forms of such systems parallel those found for cases in which a marker of a particular function becomes extended to a number of other grammatical and semantic contexts, often undergoing morphological fusion as well, and in time becomes replaced in its original function by another marker from some other semantic/pragmatic domain. This type of development is called *renewal* or *renovation*, and is described in more detail by Meillet (1915) and Heine and Reh (1984).

The Turkish and Hungarian middle/reflexive oppositions could, then, be the result of renewal processes. What makes this interpretation plausible is the attested grammaticalization channel between the reflexive function and the non-reflexive middle functions. We already know that middle markers often come from reflexive markers, both from evidence from one-form languages like French, and from cognate two-form systems like those in Russian and Old Norse. Thus, even in the absence of direct internal evidence, we might reasonably conclude that reduced forms in languages like Hungarian and Turkish come from old reflexives. Weak support for this is a piece of

[4]Emphatics seem to be the most common immediate source for reflexive markers; for other examples of this development, see Faltz (1977).

negative evidence: namely, no other attested source for middle markers has been positively identified.[5]

An additional piece of evidence is found in the case of Hungarian. Hungarian has a number of reduced-form verbs with intrinsic reciprocal meaning. These are generally intransitive when used with a plural subject, but some of them have been extended to use with singular subjects, and even become transitive. Some of these verbs in -kEd-/kEz- are given in (19):

(19) Intrinsic reciprocal

ölel-*kez-*	'embrace'
bir-*kóz-*	'wrestle, scuffle'
csatla-*koz-*	'adjoin, associate with'
dula-*kod*-ik	'grapple, wrestle, be locked together in struggle'
fogó(d)z-*kod-*	'cling to'
kösz-*köd-*	'wrestle, fight'
ölel-*kez-*	'embrace'
perle-*ked-*	'quarrel, wrangle'
talál-*koz-*	'meet'
követ-*kez-*	'follow' (T:113-114)[6]

[5]Langacker (1976) claims that one language, Tarahumara, shows a development from passive to reflexive. However, the only verb he gives as evidence is 'wash', a verb which is not representative of reflexive verbs in general, as shown by Faltz (1977). Greenberg (1986) gives comparative evidence from both within Indo-European and from other related families within his larger grouping Eurasiatic that the Latin passive/deponent desinence *-r* is cognate to impersonal passive markers in related languages (originally derived from a third person plural pronoun, for which there is also comparative evidence). In Latin, this marker covers virtually all of the middle uses that I have identified, including the passive. However, intrinsic reciprocal uses found in such verbs as *arguor* 'argue, wrangle', *loquor* 'speak' (orig. 'interlocute'), and *sequor* 'follow' (see footnote 6) suggest that this marker once had reflexive/reciprocal uses. This would lend support to the hypothesis that passive could be a source of reflexive, as well as the well-attested change in the other direction.

[6]Cf. the reflexive/reciprocal marking on English 'follow each other.' Lichtenberk (1985) gives an illuminating account of the relations between various semantic types of reciprocals which motivates the reciprocal marking on verbs like 'follow.' It would seem that an original reciprocal sense can easily become lost as a verb is retransitivized, much like the case of the Norwegian 'deponent' verb slå-*s* 'fight' (tr.) < Old Norse slå-*sk* 'fight each other.'

The existence of these verbs suggest that the /ked/ form once had a productive reciprocal use, which is now fossilized to a few verbs of inherently reciprocal semantics. Since languages quite often mark reflexive and reciprocal with the same construction, due to their similar semantics of subject-affectedness, and since we know that intrinsic reciprocals can arise from reflexive/reciprocal markers (as in Old Norse and Russian), it is probable that the reduced form in Hungarian was once a reflexive marker. It seems hightly unlikely that markers of other possible sources for the middle (e.g. passive, or inchoative markers) would also cover reciprocal uses without being reflexive markers as well.

The possibility must be left open, of course, that middle markers arise by paths other than via the reflexive. However, there should be some evidence of these former functions in these languages before this can be considered likely. Until then, it seems reasonable to assume that the reduced forms in at least some non-cognate two-form systems are old reflexives, and that the full forms are renewals of that older function.

If we observe these developments of repartition and renewal from the point of view of what changes the language system is undergoing, we find that although the changes are formally quite different, both types of change are at the outset driven by semantic factors. In the renewal case this is clear, since we have semantic extension of two different morphological items going on simultaneously, i.e. both the old reflexive and the new one of emphatic origin. In the case of repartition, we do start out with an originally fairly mechanical distinction between cliticized and non-cliticized pronominal forms. Yet this distinction is in part a result of semantic/pragmatic factors since the conditions of stress have to do with presence or absence of emphatic or contrastive meaning, much the same factors that govern the distribution of full and reduced forms in non-cognate systems. The actual change which brings about a bona-fide two-form system happens when the speaker seizes on the distinction in form and exploits it to produce a semantic differentiation. Thus, whether a two-form system arises through repartition, renewal, or even via some other yet unidentified source use, it has its basis in semantics. Viewed from the onomasiological perspective of how a given function receives formal instantiation, we find that in the development of a middle system, a set of related semantic uses come to acquire their own formal marker, distinct from that of the reflexive use.

4 Grammatical change as incremental semantic change

Now, it is possible to consider the rise of the types of systems I have described as simply historical changes in which a rule of reflexivization somehow generalizes to become a rule of intransitivization. This type of approach would be more in line with current syntactic accounts of synchronic middle systems such as those in French, Icelandic, and other languages.

However, I think it is more fruitful to consider the changes I have outlined in terms of the gradual change in semantics of the morpheme undergoing the change. Looking at this development as a type of semantic change, first of all, provides a more general account since it includes a large number of cases which do not involve reduction of transitivity. As mentioned earlier, verbs in the various middle lexical classes often have no corresponding transitive form; furthermore, in some cases they correspond to *intransitive* root forms. This type of account can also capture the generalities that hold across one-form systems, two-form cognate systems, and two-form non-cognate systems, which are formally quite different yet semantically quite similar.

Thirdly, a semantic account fits in with what we know about grammaticalization in general: we find formal and functional changes proceeding simultaneously, although not always completely in step: On the semantic side, the erstwhile reflexive markers gradually lose their properties of referentiality as they are extended to contexts in which the core properties of the reflexive no longer hold, and become markers of specific kinds of verbal semantics, with syntactic side-effects which are well documented in the literature. On the formal side, these markers gradually lose lexical and syntactic independence, and become incorporated as verbal affixes.

Lastly, a semantic account tells us something interesting from a cognitive standpoint, since the development of middle systems involve a change from indicating that the discourse referent of a particular nominal argument is the same as that for the subject, to indexing particular properties of the subject including its relation to the verbal event. That this type of development can take place, and what's more, can occur so frequently, reinforces what we know about the asymmetry of the nominal participants in the clause, and the priority of the subject among them.

To sum up, we can conclude that the semantic side of morphosyntactic change is a good deal more important than is generally recognized. It is worthwhile to set up a strong claim whose validity can be empirically tested:

namely, that semantic change undergone by morphosyntactic forms is a powerful motivating factor in the rise of new grammatical systems.

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